

2/2 021

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0129389

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE AUTHORS HAVE SHOWN THAT IN THE NON CITRATED AND NATIVE PLASMA, OBTAINED FROM THE BLOOD, STABILIZED WITH THE HELP OF THE FIBRED SURBENT OF THE CALCIUM IONS, CELLULOSE PHOSPHATE (THE M-I PREPARATION) THE COAGULATION SYSTEM FACTORS HAVE BEEN BETTER PRESERVED. THE NON CITRATED PLASMA WITH ITS PHYSICO CHEMICAL AND CURATIVE PROPERTIES HAS FAVOURABLY DIFFERED FROM THE CITRATED ONE. DUE TO A LOWER REACTOGENESIS ITS USE IS PREFERRED IN CASES OF THE DISEASES ACCOMPANYING A LIVER AFFECTION. FACILITY: BELORUSSKIY N-I INSTITUT PERELIVANIYA KROVI AND I-YA KAFEDRA GOSPITAL'NOY TERAPII MINSK. MEDITSINSKUGO INSTITUTA.

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USSR

UDC 541.28

SKOVORODKIN, N. V., SOROKINA, A. V., BUGORKOV, S. S., KRIVOKHATSKIY, A. S.,
and PETRZHAK, K. A.

"Radiochemical Determination of the Yields of Rare Earth Elements in the
Fission of ^{239}Pu and ^{241}Pu by Slow Neutrons. I. Yields of Rare Earth Elements
with Half-lives of Less Than 10 Days"

Leningrad, Radiokhimiya 12, No 3, 1970, pp 487-492

Abstract: ^{239}Pu and ^{241}Pu were purified with Dowex-1x3 (200-400 mesh) anion-
exchange resin and used as targets. All cumulative yields are expressed in
terms of the ^{144}Ce cumulative yields. Yields are reported for the following
rare earth isotopes: ^{141}La , ^{143}Ce , ^{145}Pr , ^{149}Nd , ^{149}Pm , ^{151}Pm , ^{153}Sm , ^{155}Sm ,
 ^{157}Eu , ^{159}Gd , and ^{161}Tb .

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1/2 014
TITLE--LACQUERS AND LACQUER COATINGS BASED ON FTORLONS -U-
UNCLASSIFIED PROCESSING DATE--04DEC70
AUTHOR--(03)-BUGORKOVA, N.A., CHEGODAYEV, D.D., CHERESHKEVICH, L.V.
COUNTRY OF INFO--USSR
SOURCE--(USSR). PLAST. MASSY 1970, 1(5), 65-7
DATE PUBLISHED-----70
SUBJECT AREAS--MATERIALS
TOPIC TAGS--LACQUER, FLUORINATED ORGANIC COMPOUND/(U)FTORLON FLUORINE
PLASTIC, (U)F42 FLUORINE PLASTIC, (U)F32L FLUORINE PLASTIC
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--3006/0995
STEP NO--UR/0191/70/001/005/0065/0067
CIRC ACCESSION NO--AP0134707
UNCLASSIFIED

2/2 014

UNCLASSIFIED

PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0134707

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE SOLY. OF FTORLONS (F-42 AND F-32L) IN HCONME SUB2, KETONES, AND ESTERS SUGGESTS THEIR USE AS COATINGS. HOWEVER, DUE TO PARTIAL CRYSTALLINITY, THE SWELLING OF F-42 OR F-32L FILMS IN SOLVENTS IS NOT UNIFORM AND SURFACE CRAZING OCCURS MIXED SOLVENTS, SUCH AS ACETONE 15, ACOET 30, ACOICH SUB2) SUB4 ME 30, CYCLOHEXANONE 10, AND ET CELLOSOLVE 15 PARTS REMEDY THE SITUATION. COATINGS BASED ON F-42 OR F-32L WITHSTOOD A 1 MONTH CONTACT WITH 37PERCENT HCL, 98PERCENT HNO SUB3, 50PERCENT ACOH, 40PERCENT NAOH OR 98PERCENT H SUB2 SO SUB4 AT 50DEGREES WITHOUT CHANGE.

UNCLASSIFIED

:c. Nr.

AP0107157

Abstracting Service:
CHEMICAL ABST. 3-70

Ref. Code

4R0303

123011v Preparation of high-quality pentaplast [poly-
[3,3-bis(chloromethyl)oxacyclobutane]] coatings. Bugorkova,
N. A.; Chegodaev, D. D.; Chereshevich, L. V.; Nikolaev, A. F.
(USSR). *Lakokrasoch. Mater. Ikh Primen.* 1970, (1), 34-7
(Russ). Coatings of the title polymer (I) on steel or Al were ob-
tained by brushing on the I suspensions and heating at 200°. The
coatings were cooled at various rates: in a thermostat at
1-2°/min, in air at 3-7°/min, or by quenching in water. The best
films were obtained by quenching; they had no shrinkage, 16.0%
crystallinity, no internal stresses, 4.5-5.0 kg/mm adhesion
strength to metals, 380-400 kg/cm² tensile strength at break, ~50
kg cm impact strength, 20% elongation at break, and 1×10^{16}
ohm cm vol. resistance at 20°. There was no corrosion of metals
coated with I after 3 months immersion in 30% HNO₃ soln., or 8
months immersions in 37% HCl, 98% H₂SO₄, or 40% NaOH solns.
CPJR

REEL/FRA
19890552

CH

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USSR

UDC 539.1.074.3

BORISOV, A. A., BUGORSKIY, A. P., BUSHNIN, Yu. A., DEREVSHCHIKOV, A. A.,
DUNAYTSEV, A. F., ZHIL'CHENKOV, V. D., MATULENKO, Yu. A., MESHCHANIN, A. P.,
MIKHAYLOV, Yu. V., NURUSHEV, S. B., SEN'KO, V. A., SMIRNOV, V. V., SMIRNOV,
Ye. V., SISKIN, V. V., SOLOV'YEV, L. F., and SOLOV'YANOV, V. L., Institute
of High-Energy Physics, Serpukhov

"A Hodoscopic Installation for Investigation of the Elastic Scattering of
High-Energy Particles"

Moscow, Pribery i Tekhnika Eksperimenta, No 3, May/Jun 73, pp 49-53

Abstract: A description is given of a hodoscopic installation, developed at
the Institute of High-Energy Physics, for investigation of the elastic scat-
tering of high-energy particles within the pulse range of 30-60 gigaelectron
volts/sec. The range of dispersion angles covered by the installation is
0-29 millirads with an angular resolution of ± 0.17 millirad. The total
solid angle is 39 microsteres. The pulse is determined to within $\pm 0.22\%$.
The resolving time is 35 nanosec. The dead time is 50 microsec. The pulse
pass band of the spectrometer is 8%. The statistics-setup is up to 10^6 per
hour. The installation is electrically coupled to a "Minsk-22" computer,
which stores and processes the information during the experiment. The

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USSR

BORISOV, A. A., et al., Priory i Tekhnika Eksperimenta, No 3, May/Jun 73, pp 49-53

obtained results are immediately printed out in the form of tables and graphs, and also appear on the oscillograph screen. Monitoring equipment has been developed, which keeps track of proper operation of the hodoscopes. The first results have been obtained on the scattering of π^- -mesons on nuclei at a pulse of 50 gigaelectron volts/sec and of protons within the initial-pulse range of 30-60 gigaelectron volts/sec. 3 figures. 2 tables. 3 references.

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USSR

UDC 621.311.22.002.51/.52.004.67:65.612.2(084.21)

ZAIIKA, A. A., BUGOSLAVSKIY, D. S.

Setevoy grafik na elektrostantsiyakh. (PERT Chart at Electric Power Plants), Moscow, Energiya Press, 1970, 272 pp, ill., 96 k (from RZh-Elektrotekhnika i Energetika, No 4, Apr 71, Abstract No 4 Yel56 K)

Translation: In the first part of the book a study is made of the problems of organization of control of capital repairs, the basic concepts of PERT charts are presented, and the problems of calculating capital repair PERT charts for power equipment, optimization of PERT charts and application of computers are investigated. The second part of the book is devoted to analysis of the efficiency of using PERT charts when repairing power system equipment. In this part a study is made of the operating principles and structural features of the PERT system in power equipment repairs, labor expenditure norms for calculating the PERT charts, problems of improving the planning of labor expenditures and material resources for repairing the power system equipment. The procedure is presented for estimating the savings from introducing the PERT method. The book is intended for engineering and technical workers of the power system, power plants and power repair enterprises and also for teachers and students at the universities and specialized secondary schools.

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USSR

UDC 621.438.038

BUGRIM. L. I., DIKIY, N. A., and CHICHKAN', L. A.

"A Mock-up for the Investigation of Thermoregulatory Apparatus in Gas Turbine Engines Using the Method of Structural Synthesis"

Nikolayev, Tr. Nikolayev. korablestroit. in-ta (Transactions of the Nikolayev Shipbuilding Institute) Vyp. 51, 1972 pp 64-72 (from Referativnyy Zhurnal -- Turbostroyeniye, No 7, 1972, abstract No 7.49.140)

Translation: The question of the synthesis of model gas turbine engines for the adjustment of thermoregulatory apparatus under laboratory conditions is considered. The controlling device of the model was produced with the method of structural synthesis of nonlinear systems. An experiment on transient flow was carried out on an analogue computer MN-7M. An evaluation of the precision of the model followed from the principle of comparison of the experimental results with transients of a real gas turbine engine. (4 illustrations, 7 bibliographical entries)

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1/2 018
UNCLASSIFIED
TITLE--LEVEL OF IRON IMPURITIES IN MEDICINAL RAW MATERIALS AND INJECTION
SOLUTIONS -U-
AUTHOR-(02)-BUGRIM, N.A., ZATULA, YE.I.
COUNTRY OF INFO--USSR
SOURCE--FARM. ZH. (KIEV) 1970, 25(1), 54-6
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES, CHEMISTRY
TOPIC TAGS--DRUG ANALYSIS, IRON COMPOUND, COLORIMETRY/(U)FEK M COLORIMETER
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--3004/0665
CIRC ACCESSION NO--AP0131270
STEP NO--UR/0491/70/025/001/0054/0056
UNCLASSIFIED

2/2 018

UNCLASSIFIED

PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0131270

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE FE CONTENT OF DISTO. WATER AND DRUGS SOLNS. WAS DETD. AS FOLLOWS: ADD TO A 50 ML VOLUMETRIC FLASK 5 ML 5PERCENT NA H TARTRATE TO MASK INTERFERING IONS, 5 ML 2PERCENT NH SUB2 OH.HCL TO REDUCE FE PRIME3 POSITIVE, 5 ML 25PERCENT ACOH, 1.5 ML 6N HCL (A CORRESPONDINGLY LARGER VOL. WHEN ANALYZING INJECTION SOLNS.) TO ADJUST PH TO 3-4, 0.2PERCENT O PHENANTHROLINE (I), AND DIL. TO THE MARK WITH WATER TO BE ANALYZED. AFTER 15 MIN. MEASURE THE ABSORPTION OF A FE PRIME2 POSITIVE I COMPLEX USING THE FEK M PHOTOELECTROCOLORIMETER, A BLUE FILTER, AND 30 MM CELLS. TAKE THE RESULT FROM A CALIBRATION GRAPH CONSTRUCTED FOR THE CONC. RANGE 0.01-1.0 MU G-ML FE. THE PROCEDURE WAS SUITABLE FOR DETG. LARGER THAN 0.001 MG PERCENT FE. THE FE CONTENT OF DISTO. WATER, MEDICINAL PREPNS., AND INJECTION SOLNS. MANUFD. BY DIFFERENT PLANTS RANGED FROM 0.002 TO 0.025, 0.04 TO 0.9, AND SMALLER THAN OR EQUAL TO 0.001 TO 0.62 MG PERCENT, RESP. FACILITY: KHARKOV SCI. RES. CHEM. PHARM. INST., KHARKOV, USSR.

UNCLASSIFIED

USSR

UDC 77

BELOUS, V. M. BUGRIYENKO, V. I., MARINCHIK, V. K.

"Study of Photoelectret and Thermoelectret States in Silver Halide Single Crystals and Photographic Emulsions"

V sb. Mezhdunar. kongress po fotogr. nauke, Moskva, 1970, Neserebryan materialy i neobychn. fotogr. protsessy (International Congress on Photographic Science, Moscow, 1970, Nonsilver Materials and Unusual Photographic Processes -- Collection of Works), no place of publication given, Vneshtorgizdat, no year given, 138-140 (from RZh-Fizika, No 12(I), Dec 70, Abstract No 12D1362)

Translation: Measurements of ion electrical conductivity of AgHal crystals made it possible to determine directly the activation energy for the displacement of the Ag⁺ interstitial ion ($\epsilon_1 = 0.11$ ev) and the cation vacancy ($\epsilon_2 = 0.35$ ev) and to show that ϵ_1 and ϵ_2 are considerably less than ϵ for thermal freeing of an electron from a deep capture level as is proposed in the Guerny-Mott mechanism. Irradiation of AgHal single crystals and photographic layers at low temperatures in an external field produces a photoelectret state in them; a study of thermally

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BELOUS, V. M., et al, Mezhdunar. kongress po fotogr. nauke, Moskva, 1970, Neserebryan materialy i neobychn. fotogr. protsessy, no place of publication given, Vneshtorgizdat, no year given, pp 138-140

induced currents upon heating makes it possible to determine, in view of the condition $\epsilon_1 < \epsilon_2 < \epsilon$, the preexponential factor σ_0 and the activation energy of ion conductivity; the latter, as was expected, was equal to the previously found ϵ_1 . A similar result was obtained in studying thermally induced currents under heating of AgHal-crystals and photographic layers after producing a thermoelectret state in them: the measured values of σ_0 , ϵ_1 , and ϵ_2 coincided with those obtained earlier. Finally, measurements of the dependence of the photoelectret charge on temperature also led to values of ϵ_1 and ϵ_2 coinciding with those given above. In addition, σ_0 for crystals and photographic layers differed considerably (σ_0 was much higher for photographic layers) under any method of measurement. A. L. Kartuzhanskiy.

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1/2 016 UNCLASSIFIED PROCESSING DATE--18SEP70
TITLE--THERMOELECTRET STATE IN SILVER HALIDES -U-
AUTHOR--(03)-BUGRIYENKO, V.I., MARINCHIK, V.K., BELDUS, V.M.
COUNTRY OF INFO--USSR
SOURCE--FIZ. TVERD. TELA 1970, 12(1) 46-50
DATE PUBLISHED-----70
SUBJECT AREAS--MATERIALS, PHYSICS
TOPIC TAGS--THERMAL EFFECT, SILVER COMPOUND, IODIDE, BROMIDE, CHLORIDE,
THERMOELECTRIC PHENOMENON
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1980/0237 STEP NO--UR/0181/70/012/001/0046/0050
CIRC ACCESSION NO--AP0048516
UNCLASSIFIED

2/2 016

UNCLASSIFIED

PROCESSING DATE--18SEP70

CIRC ACCESSION NO--AP0048516

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. COOLING OF SINGLE CRYST. AGCL, AGCL(I), AGBR, AND AGBR(I) DOWN TO 77DEGREESK IN AN EXTERNAL ELEC. FIELD LEADS TO THE APPEARANCE OF A THERMOELECTRET STATE. RELATED TO THE SHIFT OF INTERSTITIAL AG IONS. HEATING OF OVER POLARIZED SPECIMENS IS ACCOMPANIED BY THE APPEARANCE AT 120-135DEGREESK OF A MAX. OF THERMALLY DEPOLARIZED CURRENT. FORMULAS ARE DEVELOPED WHICH ALLOW DETN. IN TERMS OF THE EXPTL. RESULTS, OF THE BASIC PARAMETERS WHICH CHARACTERIZE THE TEMP. DEPENDENCE OF IONIC ELEC. COND.

1/2 023 UNCLASSIFIED PROCESSING DATE--1600T70
TITLE--THERMOELECTRET STATE OF PHOTOEMULSION LAYERS -U-
AUTHOR--(03)-MARINCHIK, V.K., BUGRIYENKO, V.L., BELOUS, V.M.
COUNTRY OF INFO--USSR **B**
SOURCE--ZH. NAUCH. PRIKL. FOTOGR. KINEMATOG. 1970, 15(2), 151-3
DATE PUBLISHED-----70

SUBJECT AREAS--METHODS AND EQUIPMENT, PHYSICS
TOPIC TAGS--PHOTOGRAPHIC EMULSION, THERMAL EFFECT, ELECTRET, LUMINESCENCE

CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1996/1721 STEP NO--UR/0077/70/015/002/0151/0153
CIRC ACCESSION NO--AP0118699
UNCLASSIFIED

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023

UNCLASSIFIED

PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AP0113699

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. LAYERS OF NUCLEAR (YA 2 TYPE) AND OPTICAL AG(I, BR) EMULSIONS WITH A THICKNESS OF 50 MU WERE TESTED. THE THERMOELECTRET STATE WAS GENERATED BY APPLYING AN EXTERNAL VOLTAGE OF 1 KV AND SLOW COOLING OF THE SAMPLE TO THE TEMP. OF LIP. N. THEN THE FIELD WAS SWITCHED OFF AND TEMP. ROSE SLOWLY. THEN THE FIELD WAS SWITCHED OFF AND TEMPERATURE ROSE SLOWLY. THE DISCHARGE CURRENT WAS RECORDED WITH AN ELECTROMETRIC INTENSIFIER. A COMPLEX DEPENDENCE OF I ON T WAS FOUND. THE CHANGE IN THE DISCHARGE CURRENT WITH TEMP. IS INFLUENCED NOT ONLY BY THE PROCESSES TAKING PLACE IN THE EMULSION MICROCRYSTALS BUT ALSO BY THE ORDERING OF THE DIPOLE TEXTURE CREATED IN GELATINE. THE MAX. OF THE THERMODEPOLARIZATION CURRENT OBSD. AT 110 AND 170DEGREESK BELONG TO THE AG HALIDE MICROCRYSTALS AND ARE DUE TO THE SHIFT IN THE INTERSTITIAL AG IONS (PEAK AT 110DEGREESK) AND THE CATION VACANCIES (PEAK AT 170DEGREESK). THESE PEAKS ARE MOST CLEARLY VISIBLE IN THE NUCLEAR EMULSION BECAUSE THE AG HALIDE CONCN. IN IT IS MUCH HIGHER. THE MAX. OF THE THERMIONIC CURRENT AT THE SAME TEMPS. AT WHICH AN INTENSIVE DAMPING OF THE GREEN AND ORANGE RED LUMINESCENCE BANDS OF THE MICROCRYSTALS IS OBSD. ALSO SHOWS THAT THE DEPENDENCE OF THE LEVEL OF LUMINESCENCE OF THE BANDS ON TEMP. IS DETD. BY IONIC PROCESSES.

FACILITY: ODESS. GOS. UNIV., ODESSA, USSR.

UNCLASSIFIED

USSR

UDC: 624.131.531.1

BUGROV, A. K.

"Pressure of Uncoupled Soil on a Rigid Wall With the Wall Shifts Taken Into Account"

Podol'sk, Osnovaniya fundamenty i mekhanika gruntov, No 5, 1972, pp 5-8

Abstract: Because the Winkler model of the interaction of the soil and the facing wall does not always correctly describe the interaction of the ground with the rear boundary of a building, and does not explain the nonlinear dependence between shifts in the wall and the soil pressure, the author considers the problem of horizontal shifts in boundary of a prism of loose soil from an external load. In doing so, he makes a new assumption regarding the formation of "partial" sliding surfaces, with overflow, within the limits of the compressed part of the prism and beginning with the contact with the load boundary. As a result of the solution to this problem, formulas are obtained for the horizontal shifts of the inclined and vertical limits of the prism. A system of equations is derived which, when solved, yields the components

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UDC: 624.131.531.1

BUGROV, A. K., Osnovaniya fundamenty i mekhanika gruntov, No 5, 1972, pp 5-8

of the wall shift and the soil pressure. However, the solution is difficult and the author recommends use of successive approximations. His solution was in satisfactory agreement with actual measurements.

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USSR

UDC 616.28-001.34-091

PRONIN, L. S., MUDRETISOV, N. I., YAKIMETS, I. M., MOROZOV, V. N., Candidates of Medical Sciences, BUGROV, V. V., and NEVEROVA, G. M., Candidates of Technical Sciences

"Pathomorphology of Trauma of the Auditory Analysor After Single Exposure to Pulsed Noise"

Moscow, Vestnik Otorinolaringologii, No 1, Jan/Feb 72, pp 37-43

Abstract: After a single 1-second exposure to high intensity (155-173 db) sound impulses of a sinusoidal form and a frequency of 10-2000 hz, guinea pigs suffer partial or complete loss of hearing due to mechanical destruction or necrosis of the organ of Corti. Pathological processes terminate within 3 days. Twelve days after exposure to the less traumatic low-frequency waves, the organ of Corti recovers, with vacuolization. Medium frequency sounds cause some damage to the spiral ganglion, and high frequency sounds induce severe, irreversible destruction of the organ of Corti. Middle ear injury is insignificant, and cortical centers of hearing remain intact.

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1/2 019
TITLE--TOWARD NEW SUCCESSES -U- UNCLASSIFIED

PROCESSING DATE--09OCT70

AUTHOR--BUGROV, V.V.

B

COUNTRY OF INFO--USSR

SOURCE--SOVETSKAYA BELORUSSIYA, JUNE 30, 1970, P 2, CULS 6-8

DATE PUBLISHED--30JUN70

SUBJECT AREAS--MATERIALS, CHEMISTRY

TOPIC TAGS--CHEMICAL PLANT, INDUSTRIAL PRODUCTION, SYNTHETIC FIBER,
ETHYLENE GLYCOL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAE--1993/0099

STEP NO--UR/9016/70/000/000/0002/0002

CIRC ACCESSION NO--AN0113077

UNCLASSIFIED

2/2 019

UNCLASSIFIED

PROCESSING DATE--090CT70

CIRC ACCESSION NO--AN0113077

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. ACCORDING TO V. V. BUGRAV, CHIEF,
DEPARTMENT OF PLANNING AND ECONOMICS, MUGILEV COMPLEX OF SYNTHETIC
FIBER, THE COMPLEX WILL SOON BE READY TO BEGIN FULL SCALE PRODUCTION.
FIFTY PERCENT OF THE ETHYLENE GLYCOL, WHICH IS BOUGHT ABROAD, WILL BE
REUABLE AFTER ITS REGENERATION.

UNCLASSIFIED

USSR

MURASHKINA, Ye. M., BUGROVA, I. A.

"A System of Servicing Programs"

Tr. N.-i. i Proekt. In-ta Mekhaniz. i Avtomatiz. upr Proiz-vom v Avtomob. Prom-sti [Works of Scientific Research and Planning Institute for Mechanization and Automation of Production Control in the Motor Vehicle Industry], No 1, 1971, pp 78-80, (Translated from Referativnyy Zhurnal, Kibernetika, No 3, 1972, Abstract No 3 V524 by the author's).

Translation: A description is presented of a program service system allowing the required programs to be selected from a magnetic tape library without using punch tape. The system includes debugging, editing, magnetic tape access and other programs. Recommendations are given for the use of the service programs in direct operations with the computer.

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1/2 009 UNCLASSIFIED PROCESSING DATE--04DEC70
TITLE--1,1,3,TRICHLOROACETONE -U-

AUTHOR--(05)-BUGROVA, L.V., RUDNEV, G.K., RADCHENKO, V.I., KHRISTICH, A.I.,
DRAKINA, N.V.
COUNTRY OF INFO--USSR

SOURCE--U.S.S.R. 264,385.
REFERENCE--OTKRYTIYA, IZDBRET., PROM. OBRAZTSY, TOVARNYE ZNAKI 1970,
DATE PUBLISHED--03MAR70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--ACETONE, CHLORINATED ORGANIC COMPOUND, CHEMICAL PATENT,
CHEMICAL SYNTHESIS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--3007/0841

STEP NO--UR/0482/70/000/000/0000/0000

CIRC ACCESSION NO--AA0136275

UNCLASSIFIED

2/2 009

UNCLASSIFIED

PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AA0136275

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. 1,1,3,TRICHLOROACETONE IS PREPD. BY CHLORINATING ACETONE WITH GASEOUS CL IN THE PRESENCE OF A SUBSTITUTED AMINE CATALYST NR PRIME1 R PRIME2 R PRIME3 (R PRIME1 EQUALS H, ET, PH; R PRIME2 EQUALS H, ME, ET; R PRIME3 EQUALS ME, ET, PH. THE CL IS FED INITIALLY AT A RATE OF 0.8-1 G-MIN (OPTIMUM 0.983 G-MIN) AND AT THE END AT A RATE OF 162 G-MIN FOR 1 G ACETONE. THE END PRODUCT IS SEPD. BY H SUB2 O EXTN. WITH THE RATIO 1:2 CHLORINATED PRODUCT, H SUB2 O AT 15-16DEGREES.

UNCLASSIFIED

USSR

UDC 616.981.25-022.38-092:576.851.252.097.29
(047)

BUGROVA, V. I., Institute of Nutrition, Academy of Medical Sciences USSR
Moscow

"Effects and Mechanism of Action of Staphylococcal Enterotoxin"

Moscow, Voprosy Pitaniya, No 2, 1973, pp 69-74

Abstract: The clinical and laboratory studies on humans and animals summarized in this review of the Western literature on staphylococcal enterotoxin since 1941 have yielded a great deal of information on the main symptoms of staphylococcal poisoning, the organs and tissues most affected by the toxin, its mechanism of action and interaction with various drugs. The least studied aspect of the subject appears to be the immunological changes occurring in the body following elaboration of the toxin.

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Microbiology

USSR

UDC 576.851.252.097.29

NIKOLAYEVA, I. S., YEZEPCHEK, YU. V., and BUGROVA, V. I., Institute of Epidemiology and Microbiology imeni Gamaleya, Academy of Medical Sciences USSR, Moscow

"A Method of Isolating Staphylococcus Enterotoxin Type A"

Moscow, Zhurnal Mikrobiologii Epidemiologii i Immunobiologii, No 1, 1973, p 134

Abstract: Enterotoxin type A, whose properties are not yet known in detail and which is a frequent cause of food poisoning, was isolated from Staphylococcus strain 264 grown for 48 hrs at 37°C in a nutrient medium containing amino acids and casein hydrolysate. The culture liquid was centrifuged, and the sediment was heated at 100°C for 30 minutes and then concentrated by freeze-drying. Prior to the tests, the dry material was dissolved in a minimum amount of distilled water, dialyzed, and the volume brought up to one-fifth of the initial culture liquid volume. The crude enterotoxin was then purified through precipitation with 2 volumes of 96% ethanol cooled to 5°C. The minimum toxic dose of the purified preparation contained 3.42-4.29 mg of nitrogen per kg and, after intravenous injection into cats, it produced a marked reaction in all animals, with typical clinical signs of poisoning. In gel diffusion with homologous

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USSR

NIKOLAYEVA, I. S., Zhurnal Mikrobiologii Epidemiologii i Immunobiologii, No 1, 1973, p 134

serum, the preparation yielded three precipitation lines. Electrophoresis in agar revealed three antigens, with two relatively immobile and the third accumulating in the cathode zone of the immunophoregram. Disk electrophoresis in polyacrylamide gel revealed the presence of five components in the preparation. Thus, precipitation with ethanol yields a toxic but unhomogeneous preparation, and further research is necessary in order to isolate homogeneous enterotoxins.

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1/2 018 UNCLASSIFIED PROCESSING DATE--16OCT70
TITLE--THE SYNTHESIS OF THE OPTIMAL CONTROL SYSTEMS OF THE POWER AND THE
ENERGETIC PLANTS FOR SPACE VEHICLES USING NUCLEAR ENERGY -U-
AUTHOR--(05)-BUDNER, V.A., BUGROVSKY, V.V., KANIOVSKY, S.S., MARTIOANOVA,
T.S., RYASANOV, J.A. B
COUNTRY OF INFO--USSR, FRANCE
SOURCE--INTERNATIONAL FEDERATION OF AUTOMATIC CONTROL, SYMPOSIUM ON
AUTOMATIC CONTROL, 3RD, TOULOUSE, FRANCE, MAR. 2-6, 1970, PAPER. 33 P.
DATE PUBLISHED-----70
SUBJECT AREAS--SPACE TECHNOLOGY, NAVIGATION
TOPIC TAGS--AUTOMATIC CONTROL SYSTEM, SPACECRAFT NUCLEAR PROPULSION
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAHE--1996/0005 STEP NO--FR/0000/70/000/000/0033/0033
CIRC ACCESSION NO--AT0117305
UNCLASSIFIED

2/2 018

UNCLASSIFIED

PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AT0117305

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. ANALYSIS OF THE CHARACTERISTICS AND PRINCIPLES OF A COMPLEX, AUTOMATIC CONTROL SYSTEM USED FOR NUCLEAR PROPULSION OF SPACE VEHICLES. SPECIAL ATTENTION IS GIVEN TO A SINGLE, COMPLEX AUTOMATIC CONTROL SYSTEM WITH A VARIABLE STRUCTURE, USING OPERATIONAL REGIMES AND AN INBOARD DISCRETE CONTROL SETUP. AS AN EXAMPLE, THE REALIZATION OF A SYSTEM FOR STABILIZING THE OPERATIONAL REGIME OF A THERMIONIC GENERATOR IS PRESENTED.

UNCLASSIFIED

BUGUN, L. F.

So: JPES 55015
25 JAN 72

UDC: 362.11(47-21:47-22)

DISTINCTIONS IN LEVEL AND STRUCTURE OF HOSPITAL CARE FOR RURAL PATIENTS IN DIFFERENT TYPES OF CITIES

[Article by Ye. A. Lofinova, M. V. Potekhin, V. M. Shipova, N. T. Trubilin, I. K. Smolovik, L. T. Bugun, A. K. Vlasov, Z. P. Gerasimov, Ye. F. Golovnikov, A. P. Struyev, V. A. Zhukovskiy, All-Union Scientific Research Institute of Social Hygiene and Public Health Organization Imeni N. A. Semashko, Novoskovskaya, U' yanovskaya, and Kuzhka oblast: health departments; Moscow, Sovetskoye Zurnavookhraneniye, Russian, No 12, 1971, submitted 24 March 1971, pp 16-21]

Urban therapeutic institutions play an important role in rendering qualified and particularly specialized care for the rural population.

It is a known fact that the volume of medical care rendered to the rural population by urban institutions is increasing annually, however, to date this is not taken into consideration in planning urban public health care. In addition, there are still insufficient special investigations to substantiate the rural residents' demand for specialized hospital and extramural care at different stages of organization of rural public health.

The absence of differentiated standards of the demands of the rural population with regard to special forms of medical care makes it imperative to pursue in-depth investigations of the level and distinctions of the demand for different forms of therapeutic and prophylactic care in concrete institutions of different types of clinics.

For this purpose, the All-Union Scientific Research Institute of Social Hygiene and Public Health was engaged on April 6, 1970, immediately with the Siberian public health departments of Rostovskaya, Volgogradskaya, Kirovskaya, Vologodskaya oblasts and the Bashkir Ministry of Health conducted a complex study of the level and structure of hospital, polyclinic, and visiting consultation services offered to rural residents in the different cities.

In this article we submit the results of a study of the level and structure of hospital care rendered to the rural population in different types of cities in Mordovskaya, Ulyanovskaya, and Kirsakaya oblasts; data pertaining to other basins are undergoing statistical processing.

USSR

UDC 542.91:661.733.1

NURETDINOV, I. A., KEMESOVA, I. D., KUBERINA, M. A., ISLIMOVA, A. S., and
EJINA, N. A., Institute of Organic and Physical Chemistry Acad. A. Ye.
Arbuzov, Academy of Sciences USSR

"Synthesis and Properties of Diethylaryl Seleno- and Thiophosphates"

Moscow, Izvestiya Akademii Nauk SSSR, Seriya Khimicheskaya, No 6, Jun 71,
pp 1266-1270

Abstract: The authors undertook to compare some properties of seleno- and thiophosphoric acid derivatives for the purpose of determining the effect of replacement of sulfur atom by selenium atom in the phosphyl group. For this purpose they synthesized a series of diethyl esters of arylseleno- and selenophosphoric acids. The initial substances for the synthesis of these compounds were diethylaryl phosphites obtained by the interaction of phenol, 4-chlorophenol, 2,4-dichlorophenol and 2,4,5-trichlorophenol with diethyl phosphorous acid diethylamide. The IR and ^{31}P -NMR spectra of the resultant diethylaryl thio- and selenophosphates were studied. A study of the toxicity and insecticidal properties of these compounds showed that esters of selenophosphoric acid are more toxic for warm-blooded animals than their thio analogs and less toxic for insects. Replacement of the sulfur atom by the selenium atom in the phosphyl

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USSR

NURETDINOV, I. A., et al., Izvestiya Akademii Nauk SSSR, Seriya Khimicheskaya, No 6, Jun 71, pp 1266-1270

group leads to systemic action. A correlation is established between the anticholinesterase action of diethylaryl selenophosphates and their toxicity for insects.

2/2

SEE BU...

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NAMES

Alkaloids

USSR

UDC 615.322:547.94/.074

BUI-TI-YU and MURAV'YEVA, D. A., Pyatigorsk Pharmaceutical Institute,
Pyatigorsk

"Isolation and Study of the Alkaloids of *Argemone mexicana* L. Growing in Vietnam"

Moscow, Farmatsiya, Vol 22, No 4, Jul-Aug 73, pp 32-34

Abstract: A study was made of the alkaloids of *Argemone mexicana* L. collected at the end of the period of flowering of the plant in the vicinity of Hanoi. The total content of alkaloids, which were extracted with dichloroethane from the dry plant material that had been made alkaline, was 0.28% in the herb (the external part of the plant) and 0.42% in the roots. Chromatographic separation indicated that six alkaloids were present in the plant. Four of them were identified as protopine, allocryptopine, heleritrine, and sanguinarine, while two of them could not be identified. Spectrophotometric determinations carried out in the UV range indicated that one of the two principal alkaloids, protopine, was present in the amounts of 21 and 18% with reference to the total amount of alkaloids in the herb and roots, respectively, while the other, allocryptopine was present in the amounts of 37 and 36% with reference to the total amount of alkaloids in the herb and roots, respectively. 1/1

UNCLASSIFIED

PROCESSING DATE--17JUL70

TITLE--STRUCTURE AND STRENGTH OF AMG6 ALLOY JOINTS EXECUTED BY ELECTROSLAG WELDING -U-

AUTHOR--ISHCHENKO, A.YA., BUKALO, L.A.

B

COUNTRY OF INFO--USSR

SOURCE--KIEV, AVIOMATICHESKAYA SVARKA NO 1, 1970, PP 17-20

DATE PUBLISHED-----70

21
5
26

SUBJECT AREAS--MECH., IND., CIVIL AND MARINE ENGR, MATERIALS

TOPIC TAGS--ELECTROSLAG WELDING, METAL MECHANICAL PROPERTY, WELD JOINT, MAGNESIUM ALLOY/(U)AMG6 MAGNESIUM ALLOY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRA--1979/0070

STEP NO--UR/CL25/70/000/001/0017/0020

CIRC ACCESSION NO--APCC46766

UNCLASSIFIED

Acc. Nr.: AP0046766

Ref. Code: UR0125

USSR

UDC 621.791.756:669.715

ISHCHENKO, A. YA., BUKALO, L. A.

"Structure and Strength of AMg6 Alloy Joints Executed by Electroslag Welding"

Kiev, Avtomaticheskaya Svarka (Automatic Welding), No 1, 1970, pp 17-20
(from Avtomaticheskaya Svarka, No 1, 1970, p 79)

Translation: This article contains a study of the mechanical properties of AMg6 alloy joints executed by electroslag welding and their dependence on the structure and chemical composition of the weld metal. Electrode wires and welding conditions are proposed which insure sufficiently high and stable mechanical properties of the joints. There are 3 tables, 3 illustrations and a 6-entry bibliography.

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Reel/Frame
19790070

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1/2 031 UNCLASSIFIED PROCESSING DATE--11SEP70
TITLE--RAMAN SPECTRA OF ANION COMPLEXES OF URANYL -U-
AUTHOR--BUKALOV, S.S., VDOVENKO, V.M., LADYGIN, I.N., SUGLOBOV, D.N.
COUNTRY OF INFO--USSR *B*
SOURCE--ZH. PRIKL. SPEKTROSK. 1970, 12(2), 341-4
DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--RAMAN SPECTRUM, URANIUM COMPOUND, COMPLEX COMPOUND, POTASSIUM,
CESIUM, RUBIDIUM, IR SPECTRUM

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1989/0237 STEP NO--UR/0368/70/012/002/0341/0344

CIRC ACCESSION NO--AP0106893
UNCLASSIFIED

2/2 031

UNCLASSIFIED

PROCESSING DATE--11SEP70

CIRC ACCESSION NO--AP0106893

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE RAMAN SPECTRA OF (SHOWN OF MICROFICHE) WERE RECORDED WITH A LASER SPECTROGRAPH. BY ANALOGY WITH IR SPECTRA FREQUENCIES LARGER THAN 200 CM PRIME NEGATIVE ARE ATTRIBUTED TO U HALOGEN VIBRATIONS.

UNCLASSIFIED --

0123

1/2 040 UNCLASSIFIED PROCESSING DATE--02OCT70
TITLE--PREPARATION OF POLYBUTADIENE FILMS ON A METAL SURFACE BY A
PHOTOCHEMICAL METHOD -U-
AUTHOR--BUKATAYEVA, F.M. *B*
COUNTRY OF INFO--USSR
SOURCE--ZH. PRIKL. KHIM. (LENINGRAD) 1970, 43(2) 395-402
DATE PUBLISHED-----70
SUBJECT AREAS--MATERIALS, PHYSICS
TOPIC TAGS--POLYBUTADIENE, PHOTOCHEMISTRY, PHOTOEFFECT, CHEMICAL REACTOR,
DIELECTRIC PROPERTY, POLYMER FILM, ALUMINUM, CHROMIUM, UV
RADIATION/(U)PRK7 UV LAMP
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/CPAME--1992/0304 STEP NO--UR/0080/70/043/002/0395/0402
CIRC ACCESSION NO--AP0111498
UNCLASSIFIED

2/2 040

UNCLASSIFIED

PROCESSING DATE--02OCT70

CIRC ACCESSION NO--AP0111498

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE POLYMN. OF BUTADIENE (I), INITIATED BY UV LIGHT, WAS STUDIED IN A SPECIALLY DESIGNED REACTOR IN ORDER TO DET. THE OPTIMUM CONDITIONS FOR THE PREPN. OF POLYBUTADIENE (II) FILMS ON AL OR CR SUPPORTS. I WAS BEST POLYMD. WITH UV LIGHT (λ EQUALS 250-300 NM) EMITTED BY A PRK-7 LAMP AT AN INTENSITY OF 5 TIMES 10 PRIME19 QUANTA-SEC. HOMOGENEOUS II FILMS (WHICH EXHIBITED GOOD ACID AND ALKALI RESISTANCES AND WERE INSOL. IN ORG. SOLVENTS) WERE OBTAINED AT MINUS 10 TO PLUS 25DEGREES-5-10 MM I PRESSURE. THE DIELEC. PROPERTIES OF II FILMS MARKEDLY IMPROVED FOLLOWING 5-10 MIN HEAT TREATMENT AND CONCURRENT IR IRRADN. AT 170DEGREES.

UNCLASSIFIED

1/2 025 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--SCIENTIFIC WORK DONE IN THE PROBLEM LABORATORY OF THE RUBBER
TECHNOLOGY DEPARTMENT OF THE M. V. LOMONOSOV INSTITUTE OF FINE CHEMICAL
AUTHOR--(04)--KORNEV, A.YE., KAPLUNOV, YA.N., GLAGOLEV, V.A., BUKANOV, A.M.
COUNTRY OF INFO--USSR
SOURCE--KAUCH. REZINA 1970, 29(4), 39-42
DATE PUBLISHED-----70
SUBJECT AREAS--MATERIALS
TOPIC TAGS--VULCANIZATION, FILLER, ELECTRIC CONDUCTIVITY, ELASTOMER,
ADHESIVE, SCIENTIFIC R AND D, RUBBER
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1997/0534 STEP NO--UR/0138/70/029/004/0039/0042
CIRC ACCESSION NO--AP0119453
UNCLASSIFIED

2/2 025

UNCLASSIFIED

PROCESSING DATE--300CT70

CIRC ACCESSION NO--AP0119453

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A REVIEW WITH 25 REFS. TOPICS
INCLUDE THE INFLUENCE OF VARIOUS VULCANIZATION RECIPE INGREDIENTS AND
FILLERS ON PROPERTIES OF RUBBERS, RESINOUS MIXTS., AND RESINS; ELEC.
CONDUCTING ELASTOMERS; USE OF ELASTOMERS AS ADHESIVES; AND TECHNOL.
PROCESSES SUCH AS RESIN REGENERATION. FACILITY: MOSK. INST.
TONKOI KHIM. TEKHNL. IM. LOMONOSOVA, MOSCOW, USSR.

UNCLASSIFIED

1/2 035 UNCLASSIFIED PROCESSING DATE--20NOV70
TITLE--COMPOUND OF RHODIUM WITH ALPHA AMINOBUTYRIC ACID --U-
AUTHOR--(03)-PRCKOFYEVA, I.V., BUKANOVA, A.YE., ZVYAGINTSEV, O.YE.
COUNTRY OF INFO--USSR
SOURCE--Zh. NEORG. KHIM. 1970, 15(4), 1037-9
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--RHODIUM COMPOUND, AMINE, BUTYRIC ACID, CRYSTAL, ELECTRIC
CONDUCTIVITY, IR SPECTRUM, HEAT EFFECT
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--3C02/1207 STEP NO--UR/0078/70/015/004/1037/1039
CIRC ACCESSION NO--AP0128625
UNCLASSIFIED

2/2 035

UNCLASSIFIED

PROCESSING DATE--ZONOVTC

CIRC ACCESSION NO--AP0128625

ABSTRACT/EXTRACT--(U) GP-O- ABSTRACT. ORANGE NEEDLE LIKE CRYSTALS OF (RH(LH)L SUB2 CL).H SUB2 O (I) SEPD. AFTER A MIXT. OF AQ. SOLN. OF NA SUB3 RHCL SUB6 AND ALPHA AMINOBUTYRIC ACID (LH) WAS BOILED AND THEN THE VOL. OF THE SOLN. REDUCED. I HAS NGAMMA 1.595, NALPHA 1.531, AND NBETA 1.552, LOSES H SUB2 O AT 105-100DEGREES, STARTS TO DECOMP. SIMILAR TO 280DEGREES, AND HAS A MOLAR ELEC. COND. OF 202:4 OHM PRIME NEGATIVE1 CM PRIME2 (AT PH 2.3 AND 5 TIMES 10 PRIME NEGATIVE3 MU CONC.N.). THE COND. INCREASES WITH INCREASING DILN. AND TEMP. OF SOLNS. THE IR SPECTRUM OF I IS GIVEN.

UNCLASSIFIED

C. Application of Theoretical, Probability and
Statistical Methods

USSR

SOLOMATIN, V. V., PAK, M. D. and BUKANOVSKIY, A. V.

"Application of Methods of Mathematical Statistics to the Study of the
Parametric Dependence of a System on an Object of Control"

Tr. NII Upravl. Mashin i Sistem [Works of the Scientific Research
Institute for Control Machines and Systems], 1973, No 7, pp 5-11 (Trans-
lated from Referativnyy Zhurnal Kibernetika, No 10, 1973, Abstract No
10V197)

Translation: This article is dedicated to analysis of the problem of
application of methods of mathematical statistics to the practice of
planning and improvement of control systems at industrial enterprises.
The work gives a number of equations for the dependence of parameters
of the control system on the object. Substituting the fixed values of
parameters of the object into the equations produced, the calculation
value of any parameter of the control system can be produced. The re-
sults of investigation of the parametric dependence of the system on
the control object allow a scientifically well-founded solution of the
problem of improvement of the control system and estimation of its qual-
ity to be produced.

Author's view

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USSR

UDC 621.785.532:669.15'24'26-;94

KOGAN, YA. D., and BUKAREV, V. N., Moscow, Automobile and Road Institute

"High-Temperature Nitriding of Chrome and Chrome-Nickel Steels"

Moscow, Metallovedeniye i Termicheskaya Obrabotka Metallov, No 2, 1971, pp 19-22

Abstract: The process of high-temperature nitriding is studied as a method for intensification of diffusion nitrogen saturation of certain high-alloy ferrite and austenitic steels. Steels studied included OKh13, Kh16 ferrite and Kh18N9T austenite. Nitriding was performed at 600-1000° for 1-3 hr in a medium of ammonia. The high-temperature nitriding accelerated the process of diffusion saturation of the steel with nitrogen, producing a layer 0.20-0.27 mm deep with HV 750-1000 on the ferrite steels and 0.09 mm deep with HV 950 on the austenitic steel.

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USSR

UDC: 532.525.3:532.529.4

BUKHAROV, B. I., KRASHENINNIKOV, S. Yu., ORZHEKHOVSKIY, G. Yu., YAKOV-
LEVSKIY, O. V., Moscow

"Peculiarities of Propagation of Twisted Jets of Variable Density"

Moscow, Izv. AN SSSR: Mekhanika Zhidkosti i Gaza, No 4, Jul/Aug 72, pp
33-37

Abstract: The paper presents the results of an experimental study of a twisted jet flow which develops behind centrifugal gas nozzles. The principal flow parameters -- characteristic width of the jet, the length of the back-flow, lengthwise fall-off of concentration along the jet -- were determined from data of experiments with two-component nozzles. The characteristic frequencies of pulsations of gasdynamic parameters are determined from experiments with a single-component nozzle. The resultant empirical relations are generalized. The authors thank V. I. Furletov for constructive criticism.

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USSR

UDC 591.1.15

ALIVERDIYEV, A. A., and BUKAROV, N. G.

"Effect of UV-Irradiation on the Degree of Amide Conversion of Water-Soluble Brain Proteins"

Sb. nauch. soobshch. Dagestan. un-t (Collected Scientific Works. Dagestan University), 1971, ch. 4, pp 184-185 (from RZh-Biologicheskaya Khimiya, No 7, Apr 72, Abstract No 7F1335)

Translation: The authors investigated the effect of UV radiation on the degree of amide conversion of water-soluble proteins of the fourth brain fraction in rats. It is shown that after the first and fifth sessions of exposure, an increase is observed in the amount of unstably bound amide groups, but the sum of all amide groups remains unchanged. After the tenth and fifteenth sessions, there is a reduction in the amount of both unstably bound and strongly bound amide groups. The authors examine the changes in the degree of amide conversion of brain proteins after UV exposure resulting from changes in the functional activity of the central nervous system.

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USSR

UDC 591.1.15

ALIVERDIYEV, A. A., BUKAROV, N. G., and GOSTISHCHEVA, L. V.

"Change of the Content of Amide Groups of Water-Soluble Brain Proteins Under the Effect of UV-Radiation"

Sb. nauch. soobshch. Dagestan. un-t (Collected Scientific Works. Dagestan University), 1971, ch. 4, pp 173-180 (from RZh-Biologicheskaya Khimiya, No 7, Apr 72, Abstract No 7F1333)

Translation: In experiments on rats, the authors studied the effect of UV-radiation on the content of amide groups in water-soluble and water-insoluble brain protein fractions. It is shown that in water-soluble proteins appreciable changes (relative to the control) set in after the fifth session of exposure, reaching a maximum by the tenth session. A change is noted in the ratio between unstably bound and strongly bound amide groups. After the fifth session, the water-soluble proteins showed a reduction in the content of both the unstably bound and the strongly bound groups. After the tenth session, an increase is observed in the content of unstably bound amide groups.

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USSR

UDC 591.1.15

ALIVERDIYEV, A. A., and BUKAROV, N. G.

"Certain Aspects of the Protein Metabolism of Rat Brain Under Ultraviolet Exposure"

Sb. nauch. soobshch. Dagestan. un-t (Collected Scientific Works. Dagestan University), 1971, ch. 4, pp 181-183 (from RZh-Biologicheskaya Khimiya, No 7, Apr 72, Abstract No 7F1334)

Translation: In experiments on rats, the authors studied the effect of UV-irradiation on the content of amide groups of the second fraction obtained by fractionating water-soluble proteins of the brain by a modified [Kohn] method. It is shown that within 24 hours after the first session the content of unstably bound amide groups increases by 15.7%, while the quantity of strongly bound amide groups decreases by 52.6%. After the fifth session, the quantity of strongly bound amide groups increases by 27%, while the quantity of unstably bound groups is the same as the control. After the tenth session, the content of unstably bound groups decreases by 25.6%, while the content of strongly bound groups increases by 33.1%. After the fifteenth session, the quantity of unstably bound groups had increased by 13.9%, while the quantity of strongly bound groups had decreased by 22.4%.

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- 3 -

USSR

UDC 591.1.15

ALIVERDIYEV, A. A., and BUKAROV, N. G.

"Effect of UV-Radiation on Certain Brain Proteins"

Sb. nauch. soobshch. Dagestan un-t (Collected Scientific Works. Dagestan University), 1971, ch. 4, pp 165-170 (from RZh-Biologicheskaya Khimiya, No 7, Apr 72, Abstract No 7F1332)

Translation: In experiments on rats, the authors studied the effect of ultra-violet radiation on the content of amide groups in the first fraction of brain proteins isolated by the [Kohn] method as modified for brain tissue. It is shown that after the first and fifth sessions of exposure the quantity of amide groups increases. After the tenth exposure the overall quantity and the quantity of strongly bound amide groups increase, while the quantity of unstably bound amide groups decreases. After 15 sessions, a noticeable reduction in the quantity of amide groups is observed.

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- 4 -

USSR

UDC 591.1.15

ALIVERDIYEV, A. A., and BUKAROV, P. G.

"Investigation of the Effect of Ultraviolet Irradiation on Certain Water-Soluble Brain Proteins"

Sb. nauch. soobshch. Dagestan. un-t (Collected Scientific Works. Dagestan University), 1971, ch. 4, pp 48-49 (from RZh-Biologicheskaya Khimiya, No 7, Apr 72, Abstract No 7F1330)

Translation: The authors studied the effect of UV-irradiation on the content of amide groups in the third fraction of brain protein in rats. It is shown that the content of amide groups decreases after the first exposure, and increases after the fifth exposure. The maximum content of amide groups is observed after the tenth session of UV-irradiation. An intensive reduction in the content of amide groups is observed after the fifteenth session. All irradiated animals showed a change in the ratio between readily hydrolyzable amide groups and those which hydrolyze with greater difficulty, which in the author's opinion indicates a change of protein metabolism in the brain of the exposed animals.

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USSR

UDC 621.791.754:621.643:669.715

BUKAROV, V. A., ISHCHENKO, Yu. S., PISHCHIK, V. T. AND SLAVINSKIY, V. D.,
Engineers

"Pulse-Arc Welding of Aluminum Alloy Tubes Using Nonconsumable Electrodes"

Moscow, Svarochnoye Proizvodstvo, No 11, Nov 70, pp 14-15

Abstract: Results are presented from technological studies of pulsed argon-arc welding of joints in tubes of AMg6 and SAV1 alloys using a tungsten electrode without filler wire and reverse polarity current. This type of welding provides satisfactory quality of welded seams for these alloys. A new technology has been developed for welding tubing with wall thicknesses up to 2 mm, with programed welding mode changes achieved by changing the pulse repetition frequency of current pulses. A pulse device has been developed, allowing welding by a pulsed arc using standard direct current power supplies.

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USSR

UDC 519.2

BUKATAR', M. I.

"Construction of an Approximate Solution of a Quasilinear Stochastic Differential Equation with Delay"

Tr. Seminara po teorii differents. uravneniy s otklonyayushch. argumentom. Un-t
druzhby narodov im. Patrisa Lumumby (Works of the Seminar on the Theory of Dif-
ferential Equations with a Deflective Argument. University of Friendship of
Peoples imeni Patrice Lumumba), 1972, No 8, pp 23-27 (from RZh-Kibernetika,
No 9, Sep 72, Abstract No 9V72)

Translation: An approximate method of constructing a stationary partial solu-
tion of the quasilinear stochastic differential equation with delay is proposed
on the basis of the idea of the Poincaré small parameter method.

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AA0043491-

Bukat'in, E. A.

UR 0482

Soviet Inventions Illustrated, Section II Electrical, Derwent, 1/70

178678 ILLUMINATING A SCREEN IMAGE by two sources, namely a conventional illuminator (2) of the diffusor or condenser type, and a dark field illuminator (3). The idea behind the dark field is to reverse the low densities and convert the fog from the light absorber into an emission. The points deprived of optical density do not light up, whilst those with greater density absorb disseminated light from the dark field illuminator. Sectors with low density emit disseminated light of an intensity proportional to their particular density. This light is added to the light from the conventional illuminator and balances out the brilliance of the strokes, at the same time limiting the width of the low-definition zone. The ratio of the degree of illumination afforded by the dark-field illuminator

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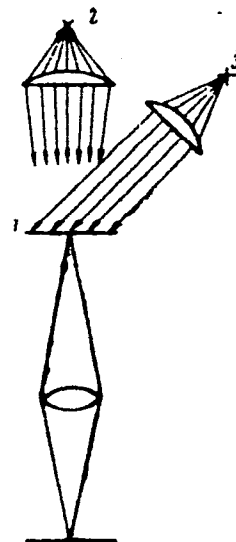
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to the brilliance is balanced so that the total effect of the light sources produces an optical density which is identical right over the surface of the strokes and transparent fields.

12.8.64 as 915791/28-12. BUKATIN, E.A. (26.8.69)
Bul 3/22.1.66 Class 57a. Int.Cl.G 03 b.



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USSR

UDC: 539.4

BUKATIN, O. V., KATIKHIN, V. D., LOZINSKIY, M. G., PASHKOV, P. O., TANANOV, A. I.

"Microstructural Study of Fatigue Destruction of a Multilayered Composition Made by Using High-Velocity Deformation"

V sb. Teoriya i prakt. vysokoskorost. deformatsii metal. materialov (Theory and Practice of High-Velocity Deformation of Metallic Materials--collection of works), Moscow, 1971, pp 22-23 (from RZh-Mekhanika, No 5, May 72, Abstract No 5V1036)

Translation: Methods of high-temperature metallography are used to study plastic deformation and fracture under conditions of a bending load on a sandwich panel made up of EI435 + 42Kh2GSNM + EI435. The experiments were done on the IMASH-10-68 machine in the temperature range from 20-800°C. An investigation was made of the effect of longitudinal and transverse bending loads on the rate and nature of fatigue crack propagation. It is shown that destruction of a layer of high-strength steel takes place with insignificant development of the deformation microrelief. The microrelief of the cladding is characterized by the formation of nonuniform and interrupted slip bands.

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USSR

UDC 539.3.532.5

BUKATOV, A. Ye. and CHERKESOV, L. V., Marine Hydrophysical Institute,
Academy of Sciences, Ukrainian SSR

"Influence of the Inhomogeneities of a Fluid Upon the Oscillations of a
Thin Elastic Plate"

Kiev, Prikladnaya Mekhanika, No 6, Jun 72, pp 111-117

Abstract: Consideration is given to a problem dealing with the forced oscillations of a thin elastic, isotropic plate, floating upon the surface of an inhomogeneous fluid with continuous change of density. In the top layer the density increases exponentially with the depth, and in the bottom layer the density is constant. Waves are generated by periodic normal stresses applied to the external side of the plate. The influence of inhomogeneity of the liquid upon the oscillations of the plate is ascertained. A study is also made of the influence of the plate characteristics upon the wave movements of the liquid. 2 figures. 2 tables. 7 references.

1/1

- 93 -

USSR

UDC 551.573

"
• BUKATY, V. I., KOPYTIN, Yu. D., POGODAYEV, V. A., KHMELEVTSOV, S. S.,
CHISTYAKOVA, L. K., Institute of Atmospheric Optics of the Siberian
Department of the Academy of Sciences USSR, Siberian Physicotechnical
Institute imeni V. D. Kuznetsov at Tomsk State University

"The Light-Reactive Motion of Aerosol Particles Acted on by Optical
Radiation"

Tomsk, Izvestiya Vysshikh Uchebnykh Zavedeniy, Fizika, No. 3, 1972, pp 41-44

Abstract: A study of the motion of water droplets of an aerosol under the action of optical radiation is described. It is noted that in the radiation heating of a water droplet, the dimensions of which are considerably greater than the wavelength of the radiation, the radiation process has a highly asymmetric character due to anisotropy of the light field in the droplet. The asymmetry of the evaporation process leads to the appearance of a resulting force from the outflow of evaporated material and causes "light-reactive" motion of the droplet in the optical field. An expression is obtained for the light-reactive force, taking into account the refracting properties of the spherical surface. Experimental studies were conducted

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USSR

BUKATY, V. I., et al, Izvestiya Vysshikh Uchebnykh Zavedeniy, Fizika, No. 3, 1972, pp 41-44

with drops fastened at the end of a vertically placed grid. The breaking away of drops was slight and was considered in finding the rate of light-reactive motion from the equation for force oscillations of a physical pendulum. The coefficient of elasticity of the grid was determined experimentally on the basis of the oscillation period measured. The initial and final dimensions of the droplet were recorded with a SKS-1M motion picture camera. A type GOR-0.2 ruby laser was used as an activating source for the light pulse energy of 0.15 joule. Calculations of velocities caused directly by light pressure and the action of radiometric forces on the part of the gas medium showed that their effect on the dynamics of the water particles was slight for the values of the parameters used in the experiment. The experimental and theoretical results agreed satisfactorily.

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- 86 -

USSR

UDC 551.573

~~BIKATY, V. I.~~ and POGODAYEV, V. A., Siberian Physicotechnical Institute imeni V. D. Kuznetsov, Tomsk State University

"Vaporization of a Drop of Water Under the Action of Infrared Radiation"

Tomsk, Izvestiya Vysshikh Uchebnykh Zavedeniy -- Fizika, No 1, 1970, pp 141-142

Abstract: The nonlinear variation with temperature of saturating vapor concentration in calculating the kinetics of vaporization of a drop of water in a radiation field was calculated by A. V. KUZIKOVSKIY and S. S. KHMELEVTSOV. In a stationary approximation for the rate of vaporization of a drop with radius r the following expressions were obtained:

$$r(t) = \begin{cases} r_0 - 0.494 \cdot q W^{1.102} t; & pr \gg 1 \\ r_0 \exp(-0.494 pq W^{1.102} t) & pr \ll 1; \end{cases}$$

The present article describes results of an experimental test of the applicability of these expressions to describe the rate of vaporization of drops in the radiation field of a laser of varying density. The purpose of the investigations was

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USSR

BUKATYY, V. I., et al., Izvestiya Vysshikh Uchebnykh Zavedeniy -- Fizika, No 1, 1970, pp 141-142

to estimate the radiation power flux densities at which the processes of the establishment of vapor concentration and temperature fields cannot be disregarded, as was done in the derivation of the above expressions. It was found that the results of KUZIKOVSKIY and KHMELEVTSOV are applicable in the case of small radiation power fluxes. For radiation power fluxes of the order of w.cm^{-2} the non-stationariness of the vaporization process and anisotropy of the temperature field according to the volume of the drop must be considered.

The authors thank P. A. BOKHAN, V. P. KARGIN, and N. N. MATVEYEV for their assistance in preparing the equipment and making the measurements, and S. S. KHMELEVTSOV for his useful comments and discussions in the course of the work.

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Acc. Nr:
AT0047550

Abstracting Service:
GEOPHYSICAL ABST.

5/70

Ref. Code:
UR0139

BUKATYY V.I.

91715n Evaporation of a water drop under the influence of infrared radiation. Bukatyi, V. I.; Pogodaev, V. A. (Sib. Fiz.-Tekh. Inst. im. Kuznetsova, Tomsk, USSR). *Izv. Vyssh. Ucheb. Zaved., Fiz.* 1970, 13(1), 141-2 (Russ). An expt. was performed to check a previously derived equation, A. V. Kuzikovskii and S. S. Khmelevtsov (1968), for evapn. rate of a water drop in a field of various optical-radiation d. At low intensity of ir radiation, the exptl. data give good results when the equation is applied. At higher intensity of irradiation, the unsteady-state nature of the evapn. process and anisotropy of temp. field have to be considered to obtain good results.

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REEL/FRAME
19791116

USSR

UDC 536.421.4+536.421.1

KUZNETSOV, V. I., MOHRITSKIY, V. A. BUKAYEV, V. A., and PESOTSKIY, G. S.

"Investigating Epitaxy Conditions of Gallium Arsenide"

V sb. Kristallizatsiya i faz. prevrashcheniya (Crystallization and Phase Transformations--collection of works) Minsk, "Nauka i tekhn." 1971, pp 71-79 (from RZh-Fizika, No. 9, 1971, Abstract No. 9E397)

Translation: The peculiarities of the oriented growth of GaAs layers from a solution of As in a Ga melt on a GaAs substrate are investigated. A method is developed for obtaining early stages of the epitaxial layers from the solution-melt. An optimal method is selected for processing the substrate surfaces as well as for conditions of epitaxy of the layers with sufficiently perfect crystalline structures and good electrophysical characteristics.

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1/2 026

UNCLASSIFIED

PROCESSING DATE--30OCT70

TITLE--THERMAL AND THERMOOXIDATIVE AGING AND STABILIZATION OF POLYIMIDES
-U-

AUTHOR--(03)-RAFIKOV, S.R., ARKHIPOVA, I.A., BUKETOVA, N.I.

COUNTRY OF INFO--USSR

SOURCE--VYSOKOMOL. SOEDIN., SER. B 1970, 12(3), 234-7

DATE PUBLISHED-----70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--PHENYLENE, PYROMELLITIC ACID, IMIDE, PHTHALIC ANHYDRIDE,
THERMAL STABILITY, CHEMICAL STABILIZER, BROMINATED ORGANIC COMPOUND,
TENSILE STRENGTH, PLASTIC FILM

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRA--2000/0687

STEP NO--UR/0460/70/012/003/0234/0237

CIRC ACCESSION NO--AP0124359

UNCLASSIFIED

2/2 026

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0124359

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. POLY(OXDIPHENYLENE
PYROMELLITIMIDE) (I) POWDER OR FILMS CONTG. HALOGENATED PYROMELLITIC
DIANHYDRIDE IN THE MIDDLE OF THE CHAIN OR AHLOGENATED PHTHALIC ANHYDRIDE
AT THE TERMINALS, WAS DEGRADED AT 500-630DEGREES. THE STABILIZED I HAS
SUPERIOR DEGRADATION RESISTANCE AND HIGH APPARENT ACTIVATION ENERGY.
THE MOST EFFECTIVE STABILIZERS WERE THE BROMINATED FRAGMENTS. TTHE
STABILIZED I FILMS HAD EXCELLENT TENSILE STRENGTH, WHICH WAS UNAFFECTED
EVEN AT GREATER THAN 500DEGREES. FACILITY: INST. KHIM. NAUK,
ALMA ATA, USSR.

UNCLASSIFIED

2/2 029

UNCLASSIFIED

PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AT0132867

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE POLYCONDENSATION OF (P,H SUB2 NC SUB6 H SUB4) SUB2 O WITH 1,4,DICHLOROPHTHALIC ANHYDRIDE (I), 1,4,DIBROMOPHTHALIC ANHYDRIDE (II), 4,5,DIIODOPHTHALIC ANHYDRIDE (III), PYROMELLITIC DIANHYDRIDE (IV), OR IV CONTG. SIMILAR TO 1PERCENT I, II OR III GAVE THE CORRESPONDING POLYAMIDES, WHICH, UPON HEATING AT 300DEGREES FOR 3 HR, WERE CONVERTED TO POLYIMIDES. DTA OF THESE POLYMERS SHOWED THAT THE SMALL AMT. OF THE HALOGEN CONTG. MONOMER, ADDED TO THE POLYMN. MIXT., CONSIDERABLY INCREASES THE HEAT RESISTANCE OF THE RESULTING POLYMERS AND INCREASES THE APPARENT ACTIVATION ENERGY OF THEIR THERMAL OXIDATIVE DEGRADATION.

UNCLASSIFIED

therapy

USSR

BUKEYKHANOVA, Sh. Kh., Alma Ata Clinical Hospital No 1

"Treatment of Brucellosis by Intradermal Injection of Brucellin"

Alma-Ata, Zdravookhraneniye Kazakhstana, No 6, 1971, pp 47-48

Abstract: Seven intradermal injections of low doses of brucellin at 2- to 4-day intervals brought about marked improvement in the condition of 65 out of 69 patients with chronic brucellosis. The temperature became normal and in most cases joint pains subsided considerably or disappeared, although other symptoms persisted for some time, e.g., vertigo, headaches, and enlarged liver. Brucellin therapy did not have any adverse effects on hematological indices. In four cases, brucellin aggravated the symptoms and had to be suspended after three or four injections, but other methods of treatment (not specified) brought about improvement.

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USSR

UDC 543.422+543.424+546.183

POLETAYEV, E.V., TOKMAN, I. A. and BUKHALOVA, G. A., Institute of Chemical Sciences, Academy of Sciences Kazakh SSR, Alma-Ata

"Vibrational Spectra of Trimetaphosphates in $M^I PO_3-M^{II}(PO_3)_2$ Systems"

Alma-Ata, Seriya khimicheskaya, No 5, Sept-Oct 71, pp 6-11

Abstract: Earlier research on $M^I M^{II} P_3 O_9$ (M^I = monovalent alkaline metal, M^{II} = divalent) compounds indicate the existence of various forms of trimetaphosphate anions. This study concerns the variations of the vibrational spectrum of the anion as a function of its conformability. The experiment involved $M^I PO_3-M^{II}(PO_3)_2$ binary systems. Paper chromatography confirmed the presence of $(P_3 O_9)^{3-}$ cycles in the metaphosphates $Na_4 Ca(P_3 O_9)_2$, $Na_4 Sr(P_3 O_9)_2$, $Na_4 Ba(P_3 O_9)_2$, $KCaP_3 O_9$, $CsCaP_3 O_9$ and $CsSrP_3 O_9$. Interpretation of the IR spectra of these metaphosphates presented in curves in the original article indicates that the form of the anion in $Na_4 Ca(P_3 O_9)_2$ and $Na_4 Sr(P_3 O_9)_2$ trimetaphosphates is similar to that of anhydrous sodium trimetaphosphate. The existence of non-plane $P_3 O_9$ anions with C_{3v} -type symmetry in $CsCaP_3 O_9$ and $CsSrP_3 O_9$ trimetaphosphates is suggested. The stretching vibration frequencies of the trimetaphosphates are identified and the classification of PO_2 and POP groups by symmetry type for various $P_3 O_9$ configurations is presented in tables. (2 illustrations, 3 tables, 8 bibliog. references)

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1/2 011 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--COMPLEXING IN CALCIUM METAPHOSPHATE BARIUM METAPHOSPHATE AND
CADMIUM METAPHOSPHATE BARIUM METAPHOSPHATE SYSTEMS -U-
AUTHOR-(03)-BUKHALOVA, G.A., TOKMAN, I.A., SHPAKOVA, V.M.
COUNTRY OF INFO--USSR
SOURCE--ZH. NEORG. KHIM. 1970, 15(6), 1691-3
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--PHASE DIAGRAM, PHOSPHATE, CADMIUM COMPOUND, BARIUM COMPOUND,
CALCIUM PHOSPHATE, METAL COMPLEX COMPOUND
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--3006/1407 STEP NO--UR/0078/70/015/006/1691/1693
CIRC ACCESSION NO--AP0135081

UNCLASSIFIED

2/2 011

UNCLASSIFIED

PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0135081

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. SYSTEMS OF CA(PO SUB3) SUB2 -BA(PO SUB3) SUB2 AND CD(PO SUB3) SUB2 -BA(PO SUB3) SUB2 FORM MBA(PO SUB3) SUB4 (M EQUALS CA OR CD), CONGRUENTLY M. 880 AND 816DEGREES, RESP. EACH SYSTEM FORMS 2 EUTECTICS. PHASE DIAGRAMS ARE CONSTRUCTED. FACILITY: ROSTOV. INZH.-STROIT. INST., ROSTOV, USSR.

UNCLASSIFIED

1/2 CC9 UNCLASSIFIED PROCESSING DATE--20NOV70
TITLE--DENSITY AND EQUIVALENT VOLUMES OF MELTS OF A TERNARY SYSTEM OF
SODIUM, POTASSIUM, AND CALCIUM CHLORIDES -U-
AUTHOR--(02)-SEMENTSOVA, D.V., BUKHALOVA, G.A.
COUNTRY OF INFO--USSR
SOURCE--ZH. NEORG. KHIM. 1970, 15(3), 806-8
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--MULTICOMPONENT CHEMICAL SYSTEM, SODIUM, POTASSIUM, CALCIUM,
CHLORIDE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1994/1720 STEP NO--UR/0078/70/015/003/0806/0808
CIRC ACCESSION NO--AP0115549
UNCLASSIFIED

2/2 009

UNCLASSIFIED

PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0115549

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. EQUIV. VOLS. AND D. OF THE FUSED
NA, K, CA MAGNITUDE OF CL SYSTEM WERE DETD. AT 800DEGREES AND THE DATA
ARE TABULATED, ISOD. CURVES AND EQUIV. VOLS. CURVES OF THE SYSTEM ARE
CONSTRUCTED. FACILITY: ROSTOV. INZH.-STROIT. INST., ROSTOV,
USSR.

UNCLASSIFIED

1/2 022 UNCLASSIFIED PROCESSING DATE--20NOV70
TITLE--THERMODYNAMIC RELATIONS IN THE MUTUAL QUATERNARY POTASSIUM,
CALCIUM, BARIUM MAGNITUDE OF FLUORIDE, CHLORIDE SYSTEM -U-
AUTHOR-(02)-BUKHALOVA, I.A., SEMENSOVA, D.V.
CCOUNTRY OF INFO--USSR *B*
SOURCE--Zh. NEORG. KHIM. 1970, 15(3), 809-13
DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--POTASSIUM, CALCIUM, BARIUM, FLUORIDE, CHLORIDE, MULTICOMPONENT
CHEMICAL MIXTURE, ENTHALPY, HEAT CAPACITY, ENTROPY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1994/1719 STEP NO--UR/0078/70/015/003/0809/0813

CIRC ACCESSION NO--AP0115548
UNCLASSIFIED

2/2 022

UNCLASSIFIED

PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0115548

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. CHANGE OF THERMODYNAMIC FUNCTIONS, DELTAG, DELTAH, DELTAS, AND C SUBP AT 298-1200DEGREES WERE DETD. FOR 8 REACTIONS WHICH TAKE PLACE IN THE MUTUAL QUATERNARY SYSTEM K, CA, BA MAGNITUDE OF F, CL. THREE CROSS SECTIONS (12.5, 25, AND 50PERCENT FLUORIDES) OF THE TERNARY SYSTEM WERE DETD. AND THEIR PROJECTIONS ARE CONSTRUCTED. FACILITY: ROSTOV. INZH.-STROIT. INST., ROSTOV, USSR.

UNCLASSIFIED

USSR

UDC 616.1:359.6

BUKHALOVSKIY, I. N., Professor, Colonel, Medical Corps, and IVANOV, A. I.,
Doctor of Medical Sciences, Colonel, Medical Corps

"The Effects of Physical Exertion on Heart Electrical Activity of Submariners
During a Cruise"

Moscow, Voenno-Meditsinskiy Zhurnal, No 4, 1973, pp 70-71

Abstract: EKG studies were conducted on submariners undergoing physical exercises during a cruise. The changes observed on the EKG 3 min after the exercise were within the normal range; the P-Q interval was somewhat shortened, the systole was insignificantly prolonged, the amplitude of the P wave was slightly increased in the chest leads, the amplitude of the T wave was slightly increased in the second standard lead and the precordial leads, and the S wave was somewhat increased on the left precordial leads. The S-T segment remained on the isoelectric line. Data were also obtained which indicated that atrial and ventricular conductivity was slowed. The findings indicate that physical exercise, adjusted to the individual, is important to the physiological well-being of submariners.

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USSR

UDC 639.2

BUKHANEVICH, I. B., Central Institute for the Advanced Training of Physicians

"Some Information on Poisonous Fish and Fish Dangerous to Man"

Moscow, Rybnoye Khozaystvo, No 2, 1970, pp 10-12

Abstract: Poisonous fish and fish dangerous to man are briefly described. These types of fish are subdivided into three categories: aggressive fish which may attack man in the sea and rarely on the deck of a ship; actively poisonous or poison containing fish, which have poisonous teeth or fangs and inject poison into the skin during a bite, sting or prick (including fish which have poison glands in the skin); and passively poisonous fish whose internal organs contain poisons. The poison mechanisms of specific representatives of each group are discussed. Characteristic reactions of humans to the poisons and action to be taken including certain antidotes, are noted. The usual habitats of the fish are also given. In the case of barracudas and sharks, it is noted that they attack objects swimming on the surface or trying to escape more readily than other

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USSR

BUKHANEVICH, I. B., et al., Moscow, Rybnoye Khozaystvo, No 2, 1970, pp 10-12

objects. Shouting under water will sometimes drive them away, and copper acetate tablets dissolved in the water will keep them away. The same measures are recommended for heating passively poisonous fish as are used for treating food poisoning.

2/2

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USSR

UDC 669.27.051

RADZIKOVSKAYA, S. V., and BUKHANEVICH, V. F.

"Some Chemical Properties of Tungsten Disulfide"

V sb. Khal'kogenidy (Chalcogenides--collection of works), Vyp 2, Kiev, "Naukova Dumka", 1970, pp 159-162 (from RZH-Metallurgiya, No 11, Nov 70, Abstract No 11G169)

Translation: Results are presented of a study of the chemical properties of WS_2 produced by the interaction of W anhydride with H_2S at a temperature of 1400° . WS_2 can be completely decomposed by acids and solutions of oxidants, and partially by decomposed alkalis, and does not interact with organic solvents. The chemical composition of WS_2 does not change during heating in an N_2 stream up to 600° and higher. WS_2 is stable in Ar up to 1400° and in vacuum to 1100° it oxidizes in an O_2 stream, beginning at 300° . 2 tables. S. Krivonosova

1/1

1/2 018 UNCLASSIFIED PROCESSING DATE--18SEP70
TITLE--IONIC COMPONENT OF THE CATHODIC SPUTTERING OF A COPPER SINGLE
CRYSTAL -U-
AUTHOR-(05)-BUKHANOV, V.M., YURASOVA, V.YE., SYSOYEV, A.A., SAMSONOV,
G.V., NIKOLAYEV, B.I.
COUNTRY OF INFO--USSR
SOURCE--FIZ. TVERD. TELA 1970, 12(2), 394-7
DATE PUBLISHED-----70
SUBJECT AREAS--MATERIALS, PHYSICS
TOPIC TAGS--COPPER CRYSTAL, NEON, ION, CATHODE SPUTTERING, METAL SINGLE
CRYSTAL
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1984/0144 STEP NO--UR/0181/70/012/002/0394/0397
CIRC ACCESSION NO--AP0054940
UNCLASSIFIED

2/2 018

UNCLASSIFIED

PROCESSING DATE--18SEP70

CIRC ACCESSION NO--AP0054940

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. INVESTIGATION IS DESCRIBED OF THE
ANGULAR AND ENERGY DISTRIBUTIONS OF SECONDARY POS. IONS, KNOCKED OUT
FROM THE (100) FACE OF CU BY NE IONS WITH ENERGIES OF 5 AND 20 KEV.

UNCLASSIFIED

89

USSR

UDC 616.981.49-022.38-06:616.61-008.1

BUKHANTSOVA, O. S., Chair of Infectious Diseases, First Moscow Medical
Institute imeni I. M. Sechenov

"Disturbances in Kidney Function During Food Poisoning Caused by Salmonella"

Moscow, Klinicheskaya Meditsina, Vol 49, No 2, Feb 71, pp 129-134

Abstract: A total of 140 male patients, 16 to 60 years of age, with severe and moderately severe cases of Salmonella poisoning were observed. In 108 (77.2%) cases the illness manifested itself as gastroenteritis, while in seven (5%) cases the illness was more acute. Most patients (115) were admitted during the first 24 hours of illness. Diagnosis was based on clinical, epidemiological, and laboratory data. Bacteriological analysis established Salmonella in the blood, feces, and bile. A study of renal function showed that in most patients in the acute stage of the disease, there was a reduction of glomerular filtration and standard urea clearance, an increase in tubular reabsorption, a decrease in diuresis, a change in the specific weight of the urine, pathological change in the urinary precipitate, and accumulation of nitrogen metabolites in the blood. In most cases, shifts in renal function would be quickly and completely removed by application of appropriate therapy.

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USSR

BUKHANTSOVA, O. S., Klinicheskaya Meditsina, Vol 49, No 2, Feb 71, pp 129-134

Reduction in kidney function lasted longer in only a few cases. Disturbances in the function of the canaliculus epithelium were observed on the 4th to 6th day of the infection in a few patients; this was due to the emergence of oligo-anuria with low specific weight urine. Shifts in the functional state of the kidneys were most pronounced in patients suffering from severe food poisoning and in patients with sustained collapse.

2/2

USSR

UDC 669.295.5.018.29:[620.186 + 539.56]:669.78

KOLACHEV, B. A., GORSHKOV, Yu. V., BUKHANOVA, A. A., SEDOV, V. I., and SHEVCHENKO, V. V.

"Influence of Hydrogen on the Structure and Properties of Titanium Alloy OT4-1"

Tr. Mosk. aviats. tekhnol. in-ta (Works of the Moscow Aviation Technological Institute), 1970, vyp. 71, pp 16-23 (from RZh-Metallurgiya, No 12, Dec 70, Abstract No 12 I779 by the authors)

Translation: Impact tests and tests according to the Troyano method (test basis: 500 days) showed that a hydrogen concentration $< 0.005\%$ is safe for alloy OT4-1. Threshold stresses decline with an increase in hydrogen content and at concentrations of 0.02-0.1% amount to 30 kg/mm^2 given a test basis of 500 days. The tendency of the alloy toward hydrogen embrittlement intensifies with a drop in test temperature. Alloy OT4-1 with an acicular structure is more prone to hydrogen embrittlement than that with a granular phase form. Eight illustrations. Bibliography of five titles.

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USSR

UDC 669.296:620.186:539.56:669.788

LIVANOV, V. A., KOLACHEV, B. A., and BUKHANOVA, A. A.

"Influence of Hydrogen on the Structure and Properties of Zirconium"

Tr. Mosk. aviats. tekhnol. in-ta (Works of the Moscow Aviation Technological Institute), 1970, vyp. 71, pp 23-26 (from RZh-Metallurgiya, No 12, Dec 70, Abstract No 12 I791 by the authors)

Translation: The predominant form of hydrogen embrittlement in zirconium and its alloys is hydride embrittlement, which develops at high rates of deformation, particularly in impact tests under low-temperature conditions. Hydride embrittlement in zirconium is manifested in the event of hydrogen content $> 0.005\%$. In hardened zirconium specimens, hydride embrittlement of the second kind, which develops at low rates of deformation, is found. Four illustrations. Bibliography of five titles.

1/1

USSR

B

UDC: 539.55:669.295.5'788

KOLACHEV, B. A., BUKLANOVA, A. A., and SHEVCHENKO, V. V.

"Influence of Grain Size and Type of Hydride Separation on Mechanical Properties of Titanium"

Izv. VUZ, Tsvetnaya Metallurgiya, No 5, 1970, pp 114-121

Abstract: It has been shown that an increase in grain size increases the tendency of titanium and its alloys to hydrogen embrittlement. This work presents a study of the influence of grain size on the properties of titanium with various contents of hydrogen in order to determine the nature of this hydrogen embrittlement. Studies were performed using 3 mm wire with the composition: 0.05% C, 0.12% Fe, 0.12% Si, 0.13% O₂, 0.02% N₂, remainder Ti. The dependence of rupture stress on linear grain dimensions was found to follow the patch equation. The surface energy of titanium without hydrides is 1100-1200 erg/cm², the parameter $\sigma_0 = 73$ kg/mm². When rupture occurs along the hydride-titanium boundary, the surface energy is 300-500 erg/cm², the value of $\sigma_0 = 50$ kg/mm². When a large fraction of the grains include hydrides, rupture

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USSR.

KOLACHEV, B. A., et al., Izv VUZ, Tsvetnaya Metallurgiya, No 3, 1970, pp 114-121

occurs along the grain boundaries. When the rupture stress increases with increasing relative share of free grains to the point of rupture through the body of a grain, rupture becomes intracrystalline. Chains of etching holes are noted in the rupture zone, located along the axis of extension. These chains are related to the hydrides located on boundaries parallel to the axis of extension. These holes are not related to the cracks responsible for rupture. Rupture occurs due to formation of pores along boundaries perpendicular or nearly perpendicular to the axes of extension.

2/2

- 91 -

1/2 033 UNCLASSIFIED PROCESSING DATE--23OCT70
TITLE--EFFECT OF HYDROGEN ON THE STRUCTURE AND PROPERTIES OF ALLOY VT5L
-U-
AUTHOR--(05)--KOLACHEV, B.A., KHODOROVSKIY, G.L., POPOV, A.A., BUKHANOVA,
A.A., SEDOV, V.I.
COUNTRY OF INFO--USSR
SOURCE--LITEINOE PROIZVOD. 1970, 2, 29-30
DATE PUBLISHED-----70
SUBJECT AREAS--MATERIALS
TOPIC TAGS--TITANIUM ALLOY, ALLOY DESIGNATION, ALLOY COMPOSITION, HYDROGEN
EMBRITTLEMENT, METAL CONTAINING GAS, GAS CONTAINING METAL, MECHANICAL
PROPERTY, HYDRIDE, METAL MICROSTRUCTURE/(U)VT5L TITANIUM ALLOY
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1996/1678 STEP NO--UR/0128/70/002/000/0029/0030
CIRC ACCESSION NO--AP0118656
UNCLASSIFIED

2/2 033

UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0118656

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE TI ALLOY CONTAINED AL
5.05-5.34, FE 0.08-0.14, SI 0.06, D 0.04-0.1, N 0.015-0.017, C
0.09-0.10, AND H 0.003-0.006PERCENT. THE MECH. PROPERTIES WERE STUDIED
AT MINUS 70 TO 20DEGREES FOR A H CONTENT OF 0.003-0.05PERCENT. AT THESE
TEMPS. THE ALLOY BECAME BRITTLE WHEN THE H CONTENT WAS GREATER THAN
0.035PERCENT. HOWEVER, IF THE ALLOY WAS EXPOSED TO MINUS 60DEGREES FOR
3 DAYS IT BECAME BRITTLE AT LOWER H LEVELS. THE EMBRITTLEMENT WAS
CAUSED BY HYDRIDE FORMATION, WHICH WAS OBSD. IN THE MICROSTRUCTURE WHEN
THE H CONTENT EXCEEDED THE SOLY. LIMIT. THE STRENGTH OF THE ALLOY
INCREASED AS THE H CONTENT INCREASED TO 0.015PERCENT, BUT AT A H LEVEL
ABOVE THIS VALUE THE STRENGTH DECREASED.

UNCLASSIFIED

1/2 017

UNCLASSIFIED

PROCESSING DATE--27NOV70

TITLE--CONDITION OF THE RENAL FUNCTION IN PATIENTS WITH ACUTE FORM OF FOOD
TOXINFECTION CAUSED BY SALMONELLA -U-

AUTHOR--BUKHANTSOVA, O.S.

COUNTRY OF INFO--USSR

SOURCE--TERAPEVTICHESKIY ARKHIV, 1970, VOL 42, NR 6, PP 106-109

DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--SALMONELLA INFECTION, FOOD CONTAMINATION, KIDNEY FUNCTION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRA--3002/1930

STEP NO--UR/0504/70/042/006/0106/0109

CIRC ACCESSION NO--AP0129279

UNCLASSIFIED

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UNCLASSIFIED

PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AP0129279

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. EXAMINATION OF 46 PATIENTS WITH SEVERE FORMS OF FOOD TOXICO INFECTIONS (SALMONELLOSIS) SHOWED THAT IN THE ACUTE PERIOD OF THE DISEASE MARKED DISORDERS OF THE RENAL FUNCTION CHARACTERIZED BY THE SIGNS OF GLOMERULO FILTRATION INSUFFICIENCY WERE OBSERVED. THESE DISORDERS WERE MORE PRONOUNCED IN PERSONS HAVING SUBSTAINED COLLAPSE AND LONG TERM HYPOTENSION. TREATMENT WITH INTRAVENOUS INJECTIONS OF SALINE SOLUTIONS AND GLUCOSE RAPIDLY ELIMINATE THE MENTIONED DISORDERS OF THE RENAL FUNCTION; STEADY DISORDERS OF CANALICULAR EPITHELIUM DURING CONVALESCENCE PERIOD WERE OBSERVED ONLY IN SOME CASES. FACILITY: KAFEDRA INFEKTSIONNYKH BOLEZNEY I MOSKOVSKOGO MEDITSINSKOGO INSTITUTA IM I. M. SECHENOVA.

UNCLASSIFIED

USSR

POPUSHOY, I. S., and BUKHAR, I. E.

"Limiting Fusariosis Damage in Winter Wheat"

Kishenev, Izvestiya Akademii Nauk Moldavskoy SSR, Seriya Biologicheskikh i Khimicheskikh Nauk, No 3, 1973, pp 63-69

Abstract: Fusariosis is a widespread disease of grain which lessens yield and weight in humid and semihumid regions of the world. Contagion apparently occurs in the reproductive organs during flowering. The effects of predecessors, time of planting and fertilizers on the disease were examined in different types of winter wheat. Experiments were conducted in kolkhozes in the Orgeyevskiy and Teleneshtskiy rayons. Fertilizers sharply decreased susceptibility to fusariosis for Bezostaya I and Avrora types but not Odesskaya 51. Type of predecessor also influenced disease in the following crop. Black fallow was the most favorable predecessor for disease prevention. Some disease occurred with peas as a forerunner; winter crop predecessors allowed a higher rate of disease than peas but considerably less than corn. Fertilizer N₉₀P₉₀K₉₀ increased susceptibility with corn and pea predecessors, 1/2

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USSR

POPUSHOY, I. S., and BUKHAR, I. E., *Izvestiya Akademii Nauk Moldavskoy SSR, Seriya Biologicheskikh i Khimicheskikh Nauk*, No 3, 1973, pp 63-69

although it was favorable to grain in fallow soil. Time of planting also influenced disease. Comparing times of Sep 7, 17, and 30, less fusariosis was observed in the latter two plantings. The data indicate the possibilities of lessening disease by bettering ecological conditions, choice of predecessor, optimal planting time, and application of fertilizers.

2/2

USSR

UDC 523.99

BUKHAROVA, T.A., BUKHTEYEV, A.M.

"Preparation Of Thin Films Of Cadmium Sulfide By The Reactive Sputtering Method"

Elektron.tekhnika. Nauch.-tekhn.sb. Tekhnol. i organiz. proiz-va (Electronic Technics. Scientific-Technical Collection. Technology And Organization Of Production), 1971, Issue 6(46), pp 70-72 (from RZh:Elektronika i yeye primeneniye, No 5, May 1972, Abstract No 5A232)

Translation: Thin (0.2--1.0 micron) polycrystalline films were prepared by the method of reactive 3-electrode sputtering of cadmium in a low-pressure gas-discharge plasma in an atmosphere of argon and sulphur vapor. After temperature processing in air the films acquired photosensitivity. Summary.

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USSR

UDC 62-507

BUKHARAYEV, R. G., Kazan'

"Abstract Theory of Probability Automata"

Riga, Veroyatnostnyye Avtomaty i ikh Primeneniye, "Zinatne," 1971, pp 9-22

Abstract: The author gives a survey of the basic results of investigations which he carried out on the abstract probability automata previously published. He defines probability automata as mathematical models of quite broad physical systems and cites a number of examples to confirm the existence of physical systems with indeterminate behavior that are not described by statistical laws. From the formal viewpoint probability automata are determined automata of a special form with a denumerable number of states, the field of possible states of these automata being essentially a continual set with an undetermined initial state. The difficulties in the research methodology that are characteristic for theoretical cybernetics are due to the fact that no special procedures exist for investigating discrete finite systems with a very large number of states. The author postulates 15 theorems and in conclusion lists several problems that he feels are worthy of further study. The article contains nine bibliographic entries.

1/1

USSR

UDC: 51.621.391

BUKHARAYEV, R. G.

"Problems of Synthesizing Probabilistic Converters"

V sb. Veroyatnostn. avtomaty i ikh primeneniye (Probabilistic Automata and Their Use--collection of works), Riga, "Zinatne", 1971, pp 61-75 (from RZh-Kibernetika, No 12, Dec 71, Abstract No 12V688)

[No abstract]

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USSR

UDC: 51.621.391

BUKHARAYEV, R. G.

"Abstract Theory of Probabilistic Automata"

V sb. Veroyatnostn. avtomaty i ikh primeneniye (Probabilistic Automata and Their Use--collection of works), Riga, "Zinatne", 1971, pp 9-22 (from RZh-Kibernetika, No 12, Dec 71, Abstract No 12V687)

[No abstract]

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USSR

UDC 62-507

BUKHARAYEV, R. G., Kazan'

"Problems of Synthesizing Probability Transformers"

Riga, Veroyatnostnyye Avtomaty i ikh Primeneniye, "Zinatne," 1971, pp 61-75

Abstract: The author objects to the term "probability transformers," devised by A. Gill, and prefers to use the term "random code generator." The present article is devoted to a survey of the results of analyzing and synthesizing such random code generators and control random code generators. The author poses 7 problems which he proves through the use of theorems and which he represents with equations. After a rather detailed description of the problems involved in the synthesis of the probability transformers, he concludes with the statement that he feels one of the most important problems in this area is the study of special classes of random quantities, random sequences, and various types of coding for the purpose of finding the classes that will allow local coding. The article contains 11 bibliographic entries.

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USSR

UDC 576.3:612.017:615.5

BUKHARIN, O. V., GERASIMOV, A. V., USVYATSOV, B. YA., and FROLOV, B. A.

"The Effect of Some Benzimidazole Derivatives on Protein Synthesis in Bacteria",
pp 69-72, Sintez Belka i Rezistentnost' Kletok, (Proteins Synthesis and
Cell Resistance), Leningrad, "Nauka," 1971, 104 pp

Abstract: The effect of benzimidazole derivatives on the growth of Streptococci and Staphylococci and their capacity to produce bacteriocins were studied. Intensification of protein synthesis in coccus bacteria under the influence of dibazole and metazole was noted. By means of small doses of these compounds it is possible to stimulate the growth and multiplication of bacteriocin-producing strains of Streptococci and Staphylococci. Dibazole and metazole in concentrations stimulating the growth of microbes increase the production of bacteriocin in bacteriocin-producing strains.

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